

CLAIMS:

1. An apparatus suitable for flood defence comprising a base (5), at least one slab unit (3) rotatable about an axis (4) between lowered and raised positions and being substantially balanced about the axis (4), the at least one slab unit (3) being rotatable relative to the base (5) and comprising at least part of a barrier for water retention when in its raised position, substantially at least one third of the height of the slab unit (3) comprising a downward part being positioned downwardly of the axis (4) when the at least one slab unit (3) is in its raised position, characterized by sealing means (21) for forming a seal between the base (5) and the downward part of the slab unit (3) when the at least one slab unit (3) is in its raised position whereby hydrostatic pressure deployed from water being retained by the slab unit (3) acts directly on the downward part of the slab unit (3) so as to compress the seal.
2. The apparatus as claimed in claim 1, wherein the base (5) comprises a channel (9) into which a part of the or each slab unit (3) rotates downwardly upon deployment.
3. The apparatus as claimed in claim 1 or 2, including sealing means between a said slab unit (3) and an adjacent abutment (6) or slab unit (3).
4. The apparatus as claimed in claim 3, wherein the sealing means (43) between a said slab unit (3) and an adjacent abutment (6) or slab unit (3) forms a continuous seal with the sealing means (21) between the at least one slab unit (3) and base (5) when the at least one slab unit is in its raised position.
5. The apparatus as claimed in claim 3 or 4, wherein the sealing means between a said slab unit (3) and an adjacent abutment (6) or slab unit (3) comprises at least one hinged or removable portion (43).

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6. The apparatus as claimed in claim 5, including clamping means (47) for clamping the hinged or removable portion (43) against at least one seal (46).

5 7. The apparatus as claimed in claim 5 or 6, wherein the removable portion comprises a removable board (43).

8. The apparatus as claimed in any preceding claim, wherein the slab unit (3) comprises different portions with different densities for balancing the slab unit (3) when the slab unit is not centrally positioned relative to the axis (4).

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9. The apparatus as claimed in claim 8, wherein at least one portion of the slab unit (3) with a different density includes at least one counterweight (24).

15 10. The apparatus as claimed in any preceding claim, including means to bias the at least one slab unit (3) towards the raised position.

11. The apparatus as claimed in claim 10, wherein the biasing means comprises a movable weight (51).

20 12. The apparatus as claimed in any preceding claim, wherein the slab unit (3) forms at least part of a paved way when in its lowered position.

13. An installed apparatus for flood defence as claimed in any preceding claim, wherein a substantial portion of the base (5) projects above ground level so that the apparatus provides a first level of flood defence when the or each slab unit (3) is in its lowered position and the apparatus is arranged to provide a higher second level of flood defence when the or each slab unit (3) is in its raised position.

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14. The apparatus as claimed in any preceding claim, including at least one strut (3) which is adjustable in length for supporting at least one said slab unit (3) in its raised position.

5 15. The apparatus as claimed in any preceding claim, including locking means (17,18) for locking at least one said slab unit (3) in its lowered position.

10 16. A method for flood defence comprising the steps of:
substantially balancing at least one slab unit (3) about an axis (4); and
rotating the at least one slab unit (3) about the axis (4) relative to a base
(5) from a lowered position to a raised position so that when the at least one
slab unit (3) is in the latter position it comprises at least part of a barrier for water
retention, and substantially at least one third of the height of the slab unit (3) is
positioned downwardly of the axis (4); characterized by the steps of:
15 forming a seal between the base (5) and the downward part of the slab
unit (3) when the at least one slab unit (3) is in its raised position; and
retaining water by the at least one said slab unit (3) in its raised position
whereby hydrostatic pressure deployed from the retained water acts directly on
the downward part of the slab unit (3) so as to compress the seal.

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